

## The value of trees

A radical scheme that could help save rainforests and tackle global warming at the same time deserves full support, says **William Laurance**

OF ALL the ideas about how to tackle climate change, paying countries in the tropics not to cut down their trees has always been one of the most controversial. First suggested in the 1990s as part of the negotiations over the UN climate change convention, the scheme was considered dead in the water when governments could not agree on it. Now it's back on the table – and there are good reasons why it should be encouraged.

Under the scheme, developing countries would be granted “carbon credits” for any rainforests that they save from destruction. A carbon credit represents a tonne of carbon removed from the atmosphere or saved from burning, and can be traded on the international market under the terms of the Kyoto protocol, which sets limits on the amount of carbon dioxide a country can emit. A country that exceeds its emissions limit can buy credits from one that is “in the black”.

There are several reasons why granting carbon credits for preserved rainforests is a good thing. For a start, the destruction of rainforests is responsible for a quarter of all greenhouse gas emissions. Encouraging tropical countries to slow deforestation will help prevent drastic climate change. It also makes sense economically. Every hectare of rainforest contains around 200 tonnes of carbon, most of which is released into the atmosphere if forests are razed. Greenhouse gases mix freely in the atmosphere, so saving a few thousand hectares of Bolivian rainforest would have roughly the same environmental benefit, for example, as improving the efficiency of a coal-fired plant in Ohio. Improving the plant costs a lot, so why not invest some of it in saving rainforests?

The economic logic becomes even more compelling when you consider that many of the ways people use land in the tropics, such as slash-and-burn farming and cattle ranching, are only marginally profitable. A hectare of



rainforest might cost \$300 to clear for pasture, and then be worth only \$500 to its owner. At current market values for carbon, the same hectare of rainforest, if left intact, could be worth thousands of dollars.

Rainforest carbon trading was resurrected at international climate negotiations in Montreal in December. There the Coalition for Rainforest Nations ([www.rainforestcoalition.org](http://www.rainforestcoalition.org)), a determined alliance of developing nations led by Papua New Guinea and Costa Rica, argued that the issue should be put back on the table. The coalition met again last month in New York, and there I learned about the many challenges they face.

Inevitably, the devil is in the detail. To qualify for carbon funds, a developing country will need to establish its “baseline” rate of deforestation – the amount of forest it typically fells each year. The most accurate way to do this is with satellite imaging, but that requires significant technical expertise and is expensive. Once the baseline rate is known, a

country could then profit by lowering its annual deforestation rate.

Some nations could win big. Suppose Indonesia's baseline rate is 1.5 million hectares per year, and that it reduces this by a third. If you assume that every hectare of preserved forest saves 200 tonnes of carbon emissions and that each tonne is worth \$10 on the international market, then Indonesia could gain around \$1 billion per year.

Industrial nations will only be prepared to pay such large amounts if they are convinced that it will reduce net carbon emissions, so rainforest nations will need to show that slowing deforestation in one place will not simply lead to increases elsewhere, and that their reductions are permanent. The realities of complying with such agreements make some developing nations very nervous.

Developing nations would face another challenge: ensuring that carbon money gets into the hands of the impoverished small-scale farmers and landowners who cause much of the deforestation. They would also have to monitor them to ensure they abide by any agreements to reduce forest cutting. This will be especially challenging in remote regions such as the Amazon and Congo basins, where law enforcement and land tenure are often precarious.

Despite these concerns about monitoring and compliance, developing nations direly need to develop this capacity. Lawlessness, waste and corruption in their frontier regions exact a massive cost. In Brazilian Amazonia, for example, about 80 per cent of all logging is illegal. This has major environmental and economic costs. Trading carbon credits should help governments manage their unruly frontiers.

Supporters of the plan expect negotiations before a final agreement can be hammered out, but they seem determined not to let this opportunity go. We should applaud their efforts, for their initiative could help to reduce two of the most serious environmental threats we face today: global warming and tropical deforestation. ●

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